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# SOUTH SANTA CLARA VALLEY WATER CONSERVATION DISTRICT:
# ANNUAL INVESTIGATION & REPORT OF GROUNDWATER CONDITIONS, MARCH 11, 1980

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by

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with assistance from

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prepared for

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## INTRODUCTION

The purpose of this report, in keeping with Section 75560 of the California Water Code, is to give an account of District groundwater conditions. Included are selected data for the consideration of the Board in its determination of (a) the annual overdraft, and (b) the accumulated overdraft as of the last day of the preceeding water year. Estimates are given, moreover, of the annual overdrafts for the current water year (1979-80) and for the ensuing water year.

## RESERVOIR STORAGE AND PERCOLATION

The 1978-79 water year, though slightly less humid than average, was adequate for South Santa Clara Valley. Uvas Reservoir was filled to capacity (with an occurrence of modest spillway flow) while Chesbro attained 69% of its potential storage capacity.

This ampleness of rainfall and runoff provided considerable quantities of water for groundwater recharge. Usable reservoir releases amounted to 16,293.59 acre-feet. The natural replenishment of the basin, moreover, amounted to about 59,000 acre-feet (Santa Clara Valley Water District, 1975, p. 126).

## TOTAL WATER PRODUCTION FROM UNDERGROUND SUPPLIES AND THE ANNUAL OVERDRAFT

The total amount of water produced from groundwater supplies was approximately 44,000 acre feet. Agriculture accounted for over three-quarters of the extractions; with the remaining consumption ascribed to municipal, industrial, and domestic usage.

78-79

Because these groundwater extractions did not exceed natural replenishment, there was no annual overdraft of the basin during 1978-79.[1] Underground storage rose, in fact, a net average of 21.8 feet (about 20,000 acre-feet); this brought groundwater to a seasonal average depth of 60.85 feet.

## ACCUMULATED OVERDRAFT AND PROJECTED OVERDRAFT CONDITIONS

Despite the significant uptrend of underground storage during the 1978-79 water year, an accumulated overdraft of 6.4 feet existed at the beginning of the current water year (1979-80). This last remanence of recent drought years has since been recouped by reservoir releases and recently heavy precipitation and runoff (rainfall for the present water year amounted to 154% of normal for March 11).

Present trends indicate that groundwater levels will, during the current water year, continue to increase. The annual average level is projected to be 53.8 feet (the recorded low was 79.6 feet and the expected high is 28.0 feet.) This level will, in fact, be in excess of the 54.1 feet average depth to groundwater which is considered most practicable for sustained use of the basin. A state of hydrologic balance can, subsequently, be claimed for the District in this third post-drought season.

The District can happily look forward to continued favorable water levels in the ensuing water year. This condition will be realized with even a near-average precipitation and runoff season, since significant reservoir storage (carry-over from the current water year) will be available for percolation at the start of the new season.

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[1] *ANNUAL OVERDRAFT is defined by the California Water Code as "the amount, determined by the Board, by which the production of water from groundwater supplies within the District.... during the water year exceeds the natural replenishment of such groundwater supplies in such water year."*

## SUMMARY AND PROSPECT

In spite of the fact that a desirable level of groundwater is being maintained, the District will not (with present facilities) be able to keep pace with burgeoning demands for water. Consumption will exceed 80,000 acre-feet by 1990, creating a decided water deficit; the average annual yield of the District is about 68,000 acre-feet, including reservoir releases (Koretsky King Associates, Inc., 1976, p. 7). A number of far-sighted measures are currently in the development stage.

Imported Water. The San Felipe Water Project, now under construction, is expected to be the District's major countermeasure in offsetting the anticipated increase of consumption. Much of the water delivered to the South Valley will be percolated into the underground in the Llagas Creek channel, the Little Llagas channel, and percolation ponds adjacent to the Llagas Creek. Turnouts will, moreover, be set at selected intervals for direct purchase by consumers (farmers, etc.). The first water deliveries are expected by 1987.

In view of the fact that no large accumulated overdraft is imminent, use of imported water may not be necessary in the initial delivery years. Future water purchases must be contracted, however, then may be resold to any willing consumer in the event the water is not locally needed (if a buyer is not found, however, the District must pay for the scheduled delivery).

Migration Of Water Into Northern San Benito County. The movement of District groundwater into an area called the West Bolsa Basin in Northern San Benito County is becoming increasingly obvious. This migration, estimated to exceed 15,000 acre-feet per annum, is due primarily to the recent conversion of the area to intensive agriculture (and consequent intensive water use). Since the District provides the bulk of replenishment for this extension of its own basin, a solution for equitable groundwater management must be negotiated with San Benito County (contacts have been made with officials in that direction).

Percolation Facilities. Currently being acquired and developed are a number of percolation sites, which will greatly increase the capacity of the District to recharge the underground basin. The 19-acre Ball Pond, located on the Llagas Creek near Masten Avenue, is currently in operation. An additional 38 acres (the Knepper/O'Connell Ponds) are being developed immediately north of the existing facility. Negotiations are underway, furthermore, for the acquisition of several off-stream percolation sites; most noteworthy are the Von Tagen property north of San Martin, and a recreation/percolation pond within the proposed Uvas Parkway.

Wastewater Reclamation. A wastewater treatment and distribution facility has been constructed in the Gilroy area. Designed ostensibly to alleviate drought conditions in the Fall of 1977, this project cost a total of 1.9 million dollars (interest-free financing was provided by the U. S. Bureau of Reclamation through the Emergency Drought Act of 1977). Co-sponsoring with the District were the City of Gilroy and the Santa Clara Valley Water District.

Although the present demand for reclaimed water is limited (only 185 acre-feet were produced for sale during the irrigation season of 1979), the facility is expected to play an increasingly important role in the District's overall production of water. The Gilroy Golf and Country Club is expected, for example, to integrate reclaimed water with its sprinkler system this season (1980). It is probable that other such forms of consumption will develop (from industrial, agricultural, and municipal sources) as demands for water increase. The facility has been designed, in fact, to be expanded to twice its present capacity (current capacity is 700 acre-feet per year) should the need occur.

Groundwater Extraction Charge. In view of the restrictions imposed by Proposition 13, a user-tax has been initiated to meet the increasing cost of water conservation. This pay-for-what-you-use form of taxation is not only providing badly needed revenue for the District operations, but is also encouraging conservatory measures on the part of consumers. Implementation was carried out during the 1979-80 water year, with approval by the California Legislature of AB108 (introduced by Assemblywoman Leona Egeland, of the 24th Assembly District).

Since the passage of this legislation, the District has begun an account of all water-producing facilities. Meters will be installed on municipal and industrial pumps as soon as is practicable or necessary. Initial charges for agricultural water are, however, being based on a crop-factor method of estimation (agricultural pumps producing a minimum of 20 acre-feet per year may ultimately be metered). Domestic users outside of incorporated areas are, on the other hand, being charged a flat rate per household.

# REFERENCES

Koretsky, King and Associates. 1976 Evaluation of Water Conservation Alternatives for South Santa Clara Valley Water Conservation District. (Santa Clara California: Anderson Nichols & Company).

Santa Clara Valley Water District. 1975 Master Plan for Expansion of In-County Water Distribution System. (San Jose, California).

State of California. 1977 Water Code. (Bancroft-Whitney Company, San Francisco, California).